Section 7: Erosion and Sediment Control Product Specifications

BONDED FIBER MATRIX	
PROPERTY AND TEST METHOD	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST
Material Composition and Properties manufacturer's data	100% biodegradable, 90% wood fiber, 9% natural water-resistant binder, and 1% organic and mineral activators (all by weight).
Tackifier manufacturer's data	Tackifier will be non-toxic and should become insoluble and non-dispersing upon drying.
Minimum Organic Material ASTM D 2974	90%
C-Factor [1] ASTM D 6459	≤0.05
Minimum Water Holding Capacity ASTM D 7367	600%
Functional Longevity ASTM D 5338 [2]	6-12 Months
Minimum Vegetation Establishment ASTM D 7322 [3]	300%

FIBER REINFORCED MATRIX	
PROPERTY AND TEST METHOD	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST
Material Composition and Properties manufacturer's data	Sterilized, weed-free, defibrated fibers that are completely photo-degradable or biodegradable that when cured creates and intimate bond with the soil, and a continuous erosion resistant surface.
Tackifier manufacturer's data	Tackifier will be non-toxic and should become insoluble and non-dispersing upon drying.
Minimum Organic Material ASTM D 2974	90%
C-Factor [1] ASTM D 6459	≤0.02
Minimum Water Holding Capacity ASTM D 7367	700%
Functional Longevity ASTM D 5338 [2]	≥12 months
Minimum Vegetation Establishment ASTM D 7322 [3]	400%

[1] Cover Factor is calculated as soil loss ratio of treated surface versus an untreated control surface.

[2] Functional Longevity is the estimated time period based upon ASTM D 5338 and field observations, that a material can be anticipated to provide erosion control and argonomic benefits as influenced by composition and site-specific conditions.

[3] ASTM test methods developed for Rolled Erosion Control Products have been modified to accommodate Hydraulically Applied Erosion Control Products.

FIBER MULCH	
PROPERTY AND TEST METHOD	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST
Fiber Composition manufacturer's data	100% wood fiber
Tackifier manufacturer's data	3% by weight and 100% organic

SILT FENCE FABRIC SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST		
PROPERTY AND TEST METHOD	**LOW FLOW**	**HIGH FLOW**
Water Flow Rate ASTM D 4491	20-70 g/min/ft^2	71-145 g/min/ft^2
Minimum Ultra-Violet Stability ASTM D 4355 [1]	70%	70%

[1] strength retention at 500 hours

EROSION CONTROL BLANKET	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST			
PROPERTY AND TEST METHOD	**TYPE 1**	**TYPE 2**	**TYPE 3**	**TYPE 4**
Material Composition manufacturer's data	Processed degradable 100% straw or 100% excelsior bound with regular to rapidly degrading, synthetic or natural fiber netting to form a continuous matrix.		Processed slow degrading 100% coconut fiber, excelsior, or a combo of coconut fiber and straw, bound between two slow degrading synthetic or natural fiber nettings.	
	single, double, or no net	double net only		
Functional Longevity manufacturer's data	typical 3 to 6 month	typical 6 to 12 month	typical 12 to 24 month	typical 24 to 36 month
Minimum Mass Per Unit Area ASTM D 6475	6 oz/yd^2	6 oz/yd^2	7 oz/yd^2	7 oz/yd^2
Minimum Thickness ASTM D 6525	0.2 in	0.2 in	0.2 in	0.2 in
Minimum Tensile Strength ASTM D 6818 [1]	50 lbs/ft	50 lbs/ft	75 lbs/ft	100 lbs/ft
Maximum Shear Stress ASTM D 6460 [2]	1.5 lbs/ft^2	1.75 lbs/ft^2	2 lbs/ft^2	2.25 lbs/ft^2

[1] minimum average roll values, Machine Direction (MD)

[2] (channel applications) blanket can sustain at least this shear stress without damage and without any more than 0.5" soil loss during a 30 minute flow event

EROSION CONTROL WATTLES	
PROPERTY AND TEST METHOD	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST
Material Composition and Properties manufacturer's data	Erosion control wattles are tubes of 100% weed free straw, excelsior, or coconut husk encased in ultraviolet (UV) degradable or biodegradable netting.

LANDSCAPE/WEED BARRIER FABRIC PROPERTY AND TEST METHOD	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST
Material Composition and Properties manufacturer's data	The geotextile fabric will be a woven, non-woven, or combination woven/non-woven material that allows water and air permeability, but prevents the growth of weeds and grasses. The geotextile fabric will have been designed and manufactured specifically for use as a landscape fabric/weed barrier fabric.
Minimum Mass Per Unit Area ASTM D 5261	3 oz/yd^2
Minimum Water Flow Rate ASTM D 4491	12 g/min/ft^2
Minimum Ultra-Violet Stability ASTM D 4355 (strength retention at 500 hours)	70%

TURF REINFORCEMENT MAT	SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST		
PROPERTY AND TEST METHOD	**TYPE 1**	**TYPE 2**	**TYPE 3**
Material Composition manufacturer's data	100% synthetic, non-degradable materials		
Minimum Mass Per Unit Area ASTM D 6566	8 oz/yd^2	10 oz/yd^2	12 oz/yd^2
Minimum Thickness ASTM D 6525	0.25 in	0.25 in	0.25 in
Minimum Tensile Strength ASTM D 6818	125 lbs/ft	150 lbs/ft	175 lbs/ft
Maximum Shear Stress ASTM D 6460 (channel applications)	4 lbs/ft^2	6 lbs/ft^2	8 lbs/ft^2
Minimum Ultra-Violet Stability ASTM D 4355 (strength retention at 500 hours)	80%	80%	80%
Minimum Light Penetration ASTM D 6567 (% passing)	20%	15%	15%